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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/800,420

03/12/2004

Raymond H. Kraft

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PILLSBURY WINTHROP SHAW PITTMAN LLP

ATTENTION: DOCKETING DEPARTMENT

P.O BOX 10500

McLean, VA 22102

EXAMINER

LEE, JOHN W

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,420	<b>Applicant(s)</b> KRAFT, RAYMOND H.	
	<b>Examiner</b> JOHN Wahnkyo LEE	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The response received on 9 April 2008 has been placed in the file and was considered by the examiner. An action on the merits follows.

#### ***Response to Arguments***

2. Applicant's arguments filed on 17 March 2008 have been fully considered but they are not persuasive.

#### ***Claim Rejections under 35 U.S.C. § 102***

Regarding claims 1 and 16, the applicant argues that Segman does not disclose fiducial plate. However, the examiner does not agree that the fiducial plate has to be a physical component and is well known in the art. So, the "image pixel grid" of Segman can read on fiducial plate.

The applicant argues that Segman is silent regarding acquired image features or the center point of such acquired image features. However, Segman discloses featuring an odd number of input image grid neighbor pixels, the position of the nearest input image grid pixel is chosen as the center position of the nine input image grid neighbor pixels (Fig. 4; col. 18, lines 13-28), which can read on "calculating and absolute ... centers coordinates" in claims 1 and 16.

Moreover, the applicant argues that there is no direct relationships between the respective coordinate systems of Segman input and output pixel grid. However, that is not true. Segman discloses defining a pixel position control functions relating pixel positions in output image grid to input image grid (col. 3, lines 46-50) and showing the

macro-level relationship between output image grid and input image grid (Figs. 2A, 2B and 2C; col. 8, lines 65-67).

Regarding claim 5 and 20, Segman uses a video image (col. 6, line 52) as an input image. To have a video image as an input image, it is inherent and readily apparent that Segman uses an imaging apparatus for the implementation of the method.

Therefore, the rejection to claims 1-3 and 16-18 under 35 U.S.C. § 102 cannot be withdrawn.

***Claim Rejections under 35 U.S.C. § 103***

Regarding claim 6 and 7, Segman uses a video image (col. 6, line 52) as an input image. To have a video image as an input image, it is inherent and readily apparent that Segman uses an imaging apparatus for the implementation of the method. Moreover, Correa discloses CCD and CMOS as an imaging apparatus that read on claims 6 and 7, respectively.

Therefore, the rejection to claims 6-7 and 4-19 under 35 U.S.C. § 103 cannot be withdrawn.

A detailed rejection of the claims will be provided below.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Segman (US 6,178,272)

Regarding claim 1, Segman discloses a method of fitting acquired fiducial data to a set of fiducials (abstract, “pixel”) on a fiducial plate (abstract, “image pixel grid”); said method comprising:

fitting a fiducial grid model to data acquired by an imaging apparatus (Figs. 1A and 3-(1), col. 6, lines 50-66; col. 7, lines 7, lines 1-5, “digitized video image”; col. 10, lines 27-32, “... respective coordinate systems are defined and set up ...”);

establishing a conversion (Fig. 1A, 1B, 1C, col. 7, lines 25-41, “non-linear scale up or scale down image resolution conversion”) from acquired coordinates to ideal fiducial coordinates (Figs. 2A, 2B and 2C; col. 8, lines 65-67; “output image grid and input image grid”);

and calculating an absolute location of identified acquired image feature centers (Fig. 4; col. 18, lines 13-28; “featuring an odd number of input image grid neighbor pixels, the position of the nearest input image grid pixel is chosen as the center position of the nine input image grid neighbor pixels”) in fiducial plate coordinates (Figs. 2A, 2B and 2C; col. 8, lines 65-67; “output image grid and input image grid”).

Regarding claim 2, Segman discloses said fitting comprises identifying fiducial coordinates for each fiducial captured in said data acquired by said imaging apparatus (col. 22, lines 65-67; col. 23, lines 1-7).

Regarding claim 3, Segman discloses further comprising selectively iterating said identifying coordinates for each fiducial and said calculating an absolute location of

identified acquired image feature centers (Fig. 3-(11), "... repeating steps (1) through (10)").

Regarding claim 5, Segman does not disclose any information regarding the rotation or angles of the image apparatus. So, it can be read that Segman's method does not consider a rotation of said imaging apparatus relative to a fiducial grid, which is negligible.

Regarding claim 16, Segman discloses that the steps of the method of the invention could be described as being performed by a data processor, such as a computing platform for executing a plurality of instructions (col. 5, lines 8-19). Moreover, claim 16 is analogous and corresponds to claim 1. See rejection of claim 1 for further explanation.

Regarding claim 17, claim 17 is analogous and corresponds to claim 2. See rejection of claim 2 for further explanation.

Regarding claim 18, claim 18 is analogous and corresponds to claim 3. See rejection of claim 3 for further explanation.

Regarding claim 20, claim 20 is analogous and corresponds to claim 5. See rejection of claim 5 for further explanation.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segman (US 6,178,272) in view of Kwon et al. (US 5,091,972).

Regarding claim 4, Segman disclose all the previous claim limitations except the one recited in claim 4. However, Kwon disclose that said calculating comprises utilizing a linear least squares operation (claims 1 and 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kwon's invention in Segman's invention to provide an efficient and quick method of the fit parameters as suggested by Kwon (col. 2, lines 29-31).

Regarding claim 19, claim 19 is analogous and corresponds to claim 4. See rejection of claim 4 for further explanation.

8. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segman (US 6,178,272) in view of Correa et al. (US 6,340,114).

Regarding claim 6, Segman disclose all the previous claim limitations except the one recited in claim 6. However, Correa discloses a charge-coupled device camera (col. 4, line 1, "CCD").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Correa's invention in Segman's invention to provide light gathering efficiency and immediate image availability.

Regarding claim 7, Correa further discloses that said imaging apparatus comprises a complementary metal-oxide semiconductor device (col. 4, line 3, "CMOS").

***Conclusion***

9. No claims are allowed.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN Wahnkyo LEE whose telephone number is (571)272-9554. The examiner can normally be reached on Monday - Friday (Alt.) 7:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW C. BELLA can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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